



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20234
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/931,029	08/17/2001	Syuuichi Azechi	0171-0773P-SP	2691

2292 7590 02/21/2003

BIRCH STEWART KOLASCH & BIRCH
PO BOX 747
FALLS CHURCH, VA 22040-0747

EXAMINER

ZIMMER, MARC S

ART UNIT	PAPER NUMBER
----------	--------------

1712

DATE MAILED: 02/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/931,029

Applicant(s)

AZECHI ET AL.

Examiner

Marc S. Zimmer

Art Unit

1712

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 August 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2 and 4-9 is/are rejected.
- 7) ☒ Claim(s) 3 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2, 4-5, and 8-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Mine et al., EP 653 463 A2. Mine discloses a silver powder-filled composition that maintains good curing properties after being stored for an extended period. According to page 2, lines 32-43, the essential components of the composition are (A) 100 parts of an alkenyl group-functionalized polysiloxane, (B) an organohydrogensiloxane crosslinking agent added in amount that provides 0.5 to 3 hydrosilyl groups for every alkenyl group in (A), (C) 50 to 2000 parts of a silver powder that is processed to remove virtually all adventitious ammonium and sulfate ions, and (D) a platinum hydrosilylation catalyst. Silica is preferably added as less than 50 parts relative to 100 parts of (A).

In one embodiment of Mine's invention, (B) is further functionalized with either alkoxy or epoxy groups so as to convey an adhesion-promoting characteristic to this component. When (B) is devoid of such groups, it is recommended that one of the adhesion promoters displayed on pages 7 or 8 is added to aforementioned essential materials in an amount corresponding to less than 20 parts relative to the base polymer (page 8, lines 33-34). Modification of (B) or addition of one of the compounds delineated on pages 7 and 8 is necessary to provide the desired level of self adhesion

to substrates such as the aluminum plate used in their test methods (page 9, lines 29-35).

Claims 1-2, 4-5, and 8-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Okami, U.S. Patent # 5,384,075. Okami discloses an electrically-conductive adhesive composition (column 1, lines 40-55) comprising:

- (i) 100 parts of an alkenyl group-functionalized polyorganosiloxane
- (ii) an organohydrogenpolysiloxane added in amount sufficient to supply up to 6 silicon-bound hydrogen groups per alkenyl group (column 4, lines 19-22),
- (iii) a platinum metal catalyst
- (iv) 0.5 to 20 parts (column 6, lines 47-50) of any of the organosilicon adhesion promoters taught in columns 5 and 6, and
- (v) 50 to 300 parts (column 7, lines 18-21) of a metal powder including silver.

According to column 7, lines 41-45, inorganic fillers such as fumed silica may be incorporated in amounts up to 600 parts by weight relative to 100 parts of (i).

Compositions having this makeup may be applied to adherents including glass and thermoplastics (column 8, lines 22-25).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

Art Unit: 1712

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 7, and 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over LaScola et al., U.S. Patent # 4,777,205. LaScola describes an electroconductive polysiloxane matrix in which the elastomer is obtained by either condensation- or addition- (column 6, lines 18-68 through column 8, lines 1-39), or peroxide curing (column 8, lines 40-468 through column 9, lines 1-6)). The conductive filler is silver-coated mica, which is added in a quantity corresponding to 120 to 200 parts by weight relative to 100 parts by weight of the polymer. (Beyond 200 parts by weight, the composition becomes too viscous thus limiting its utility.) Different varieties of silica, which may be added as 0 to 150 parts relative to the base siloxane polymer (column 10, lines 41-45) are contemplated in column 10, lines 17-23. Finally, it is stated that an adhesion promoter of undefined constitution may be added in an amount below 15 parts based on the weight of the composition. Presumably adhesion promoters are favored materials when the composition is to be used as an electrically conductive adhesive (column 11, lines 5-8).

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over LaScola et al., U.S. Patent # 4,777,205 in view of Fujiki et al., U.S. Patent # 5,405,896. As before, LaScola does not specifically identify those adhesion promoters that may be employed in the practice of their invention. Fujiki, on the other hand, teaches a silicone rubber composition featuring one or more of a family of structurally related adhesion promoters that provide better adhesive properties towards a number of general purpose resins (column 1, lines 51-56) than is observed with the self adhesive silicone elastomer

compositions of the prior art. Significantly, these compounds adhere to the structural limitations set forth in claim 6. In view of Fujika's contention that better adhesive properties are realized when the adhesion promoters that are the focus of their disclosure are substituted for the adhesion promoters of the prior art self-adhesive silicone rubber compositions, one of ordinary skill in the art would have been motivated to use these compounds in lieu of more conventional promoters such as, for instance, aminopropyltrimethoxysilane and glycidoxypyltrimethoxysilane.

Allowable Subject Matter

Claim 3 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Both Azechi et al., U.S. Patent # 6,469,090 and Fukushima et al., U.S. Patent # 6,414,078 disclose multilayer metal-plated silica as an conducting filler but the references are not available under the AIPA.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc S. Zimmer whose telephone number is 703-605-1176. The examiner can normally be reached on Monday-Friday 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Dawson can be reached on 703-308-2340. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Application/Control Number: 09/931,029

Page 6

Art Unit: 1712

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

February 14, 2003

A handwritten signature in black ink that reads "Robert A. Dawson". The signature is fluid and cursive, with the first name "Robert" and last name "Dawson" clearly legible, and a middle initial "A." in the center.

Robert Dawson
Supervisory Patent Examiner
Technology Center 1700